

## WALNUT WRECKER: TCD

Thousand canker disease (TCD) kills black walnut trees. There are two parts to this disease: the walnut twig beetle and *Geosmithia morbida*, a fungus. The walnut twig beetle is the size of a mustard seed and is native to the southwest United States. It carries the fungal spores on its body.

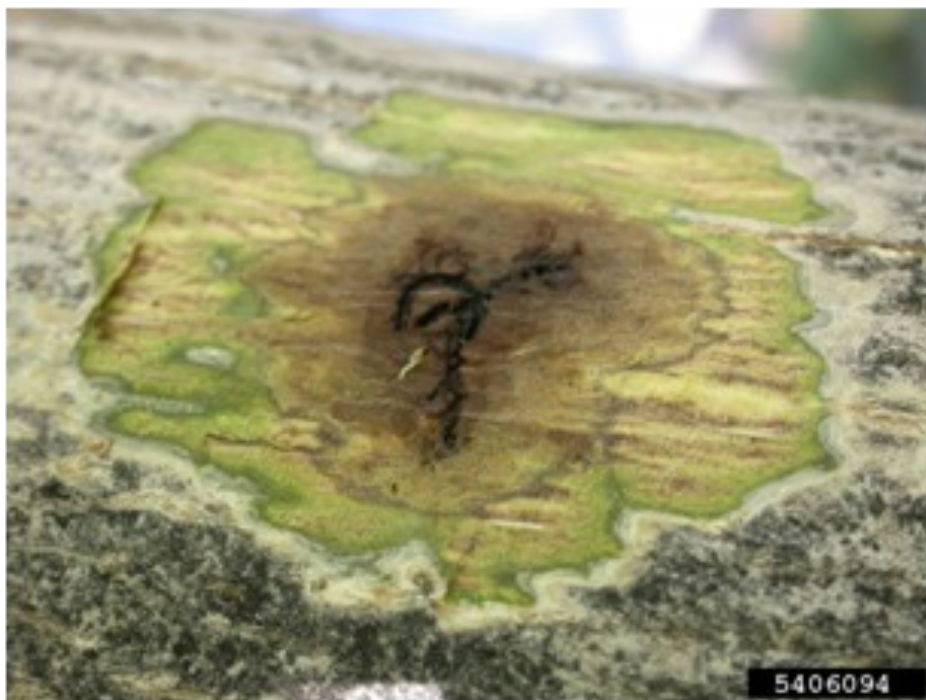
When the beetle bores into walnut branches to feed on the tree's bark tissues, it brings the fungus along. *Geosmithia morbida* then creates a canker, or dead area, under the bark, spreading from the entry hole. Multiple feedings cause the formation of thousands of cankers and destroy the tree's ability to transport water and nutrients. Gradually, branches die, and then the entire tree dies. Walnut trees affected by the disease typically die within two to three years after symptoms are noticed.

In 2010, TCD was first identified east of the Mississippi River in Knox County, Tennessee. In the eastern U.S., the beetle and fungus have now been found in North Carolina, Ohio, Pennsylvania and Virginia.



Walnut twig beetle magnified.

Steven Valley, Oregon Department of Agriculture, Bugwood.org



Canker on a walnut twig.

Ned Tisserat, Colorado State University, Bugwood.org

The best protection from TCD and other forest pests is diversity. Having a variety of species and tree ages in your forest will allow it to better respond to forest health threats. If you have a pure walnut stand or plantation, proper management is a must. Make sure you allow appropriate growing space. Nutrient-stealing weeds such as fescue and bush honeysuckle should be controlled. There are indications that TCD is stressed-related. Healthy, vigorous trees will have the best chance for overcoming this threat should it spread.

For more information about TCD go to <http://thousandcankers.com> .

The potential for TCD was discovered in Indiana last year. *Geosmithia morbida* was found in a walnut plantation in Brown County. The walnut twig beetle was not found. The fungus was instead found on a small native weevil, *Stenomimus pallidus*. None of the walnut trees showed symptoms of TCD. The DNR, U.S. Forest Service and Purdue University are conducting additional studies in the plantation to better understand the disease and insects there. Black walnut within the plantation is quarantined.

As of December 2014, this is the only known occurrence of TCD in Indiana. The walnut twig beetle has not been detected in any location in Indiana. *Geosmithia morbida* has not been detected in any other location in Indiana. Visual surveys for the disease symptoms and trapping surveys for the walnut twig beetle are ongoing throughout Indiana with a focus on areas anticipated to be likely introduction points.